

REMARKS

This Amendment is submitted in response to the Office Action dated May 6, 2004, having a shortened statutory period set to expire August 6, 2004, extended to September 6, 2004. Applicant has proposed an amendment to the specification to update the status of the application referenced therein. The proposed amendment to the specification does not contain any new matter.

In paragraph 2 of the present Office Action, Claims 1-2, 4-6, 9-11 and 14-15 are rejected under 35 U.S.C. § 102(b) as unpatentable in view of U.S. Patent No. 5,187,706 to *Frankel et al.* (*Frankel*). In addition, in paragraph 3, Claim 3 is rejected under 35 U.S.C. § 103 as unpatentable over *Frankel* in view of U.S. Patent No. 6,223,236 to *Kori*. Those rejections are respectfully traversed, and favorable reconsideration of the amended claims is requested.

Applicant submits that *Frankel*, whether considered individually or in combination with *Kori*, does not render the present claims unpatentable under 35 U.S.C. § 102 or § 103 because the cited prior art does not teach or suggest each feature of the claims as amended herein. For example, *Frankel* (and *Kori*) does not teach or suggest the data processing system of exemplary Claim 1, which includes:

- a plurality of processing nodes connected to operate in a high speed, high bandwidth system interconnect topology;
- each of the processing nodes having at least one processor therein that executes software instructions to process data;
- volatile memory distributed in one or more of said processing nodes providing data and instruction storage in a shared memory address space accessible to multiple of said plurality of processing nodes through communication via said high speed system interconnect;

With respect to the “processing nodes” and “high speed interconnect topology” recited in Claim 1, the present Office Action generally cites the communication network shown in *Frankel*’s Figure 1, which illustrates a number of telephony switches coupled by trunk lines. As noted by the Examiner, *Frankel* further discloses at col. 3, lines 1-3 that *Frankel*’s invention is

“applicable to any nodes of any type of communications network and should not be construed to be limited to customer location and central office types of applications.”

While *Frankel* is directed to communications networks, the present invention is directed to a shared memory computer system including multiple “processing nodes having at least one processor therein that executes software instructions to process data,” as well as “volatile memory distributed in one or more of said processing nodes providing data and instruction storage in a shared memory address space accessible to multiple of said plurality of processing nodes through communication via said high speed system interconnect.” Because *Frankel* is directed to communications network and associated method of routing communications rather than a shared memory computer system, *Frankel* does not teach or suggest the claimed “processor ... that executes software instructions to process data” or the claimed “volatile memory distributed in one or more of said processing nodes providing ... storage in a shared memory address space accessible ... through communication via said high speed system interconnect.” Applicant accordingly submits that the rejections of Claims 1, 9, 14 and their respective dependent claims in view of *Frankel* are overcome.

With respect to Claim 3, Applicant further respectfully submits that the § 103 rejection in view of *Frankel* and *Kori* is overcome because the combination of references is not supported by the requisite motivation or suggestion. As set forth in MPEP 2143, the first criterion for establishing a *prima facie* case of obviousness is that “there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to ... combine reference teachings.” In evaluating motivation or suggestion to combine reference teachings, “a prior art reference must be considered in its entirety, i.e., as a whole” (emphasis in original). MPEP 2141.02, citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

As noted above, *Frankel*, taken as a whole, is directed to a communications network. *Kori*, on the other hand, is directed to a hierarchical bus structure for a computer system (*Kori*, Title and Abstract). Despite the apparent disparity in the subject matter of the references when

each is considered as a whole, paragraph 4 of the present Office Action states that “it would have been obvious ... to include the hierarchical bus of Kori into the system of Frankel et al. ... because a hierarchical bus increases the number of devices connectable to the bus ... and the quantity of data transmitted to a system at an upper layer can be reduced.”

Applicant respectfully traverses this assertion because the cited references (and the present Office Action) do not explain how the ordinarily skilled artisan is to apply *Kori's* teaching regarding computer system buses to *Frankel's* telecommunication network. That is, an ordinarily skilled artisan might be motivated by *Kori's* disclosure to implement additional layers of hierarchical buses to a conventional computer system to achieve the benefits cited by the Examiner as motivating the combination. However, there is no teaching or motivation within *Kori* (or in any other reference of record) that would lead the ordinarily skilled artisan to select and then apply *Kori's* teaching regarding computer bus architecture to *Frankel's* communication network, and moreover, no indication in the references (or the Office Action) what would result from such a combination.

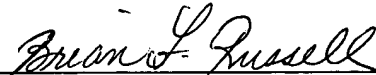
Because the combination of *Frankel* and *Kori* is not supported by the references or record, Applicant respectfully submits that the rejection of Claim 3 is overcome.

Applicant notes with appreciation the indication in paragraph 5 of the present Office Action that Claims 7-8, 12-13 and 16-22 are directed to allowable subject matter.

Having now responded to each objection and rejection set forth in the present Office Action, Applicant believes all pending claims are now in condition for allowance and respectfully requests such allowance.

Enclosed is a check in the amount of \$110.00 for a one month extension of time. Please charge \$54.00 for 3 additional claims in excess of 20 to IBM Corporation Deposit Account No. 09-0447. No additional fee is believed to be required. If, however, any additional fees are required, please charge those fees to IBM Corporation Deposit Account No. 09-0447.

Respectfully submitted,



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